

PAT-NO: JP403202480A

DOCUMENT-IDENTIFIER: JP 03202480 A

TITLE: PRODUCTION OF PLATED STEEL SHEET  
HAVING CORROSION-RESISTING CHROMIUM CHELATE  
FILM

PUBN-DATE: September 4, 1991

INVENTOR-INFORMATION:

NAME

SAITO, KATSUSHI  
MIYAUCHI, YUJIRO

ASSIGNEE-INFORMATION:

NAME

NIPPON STEEL CORP

COUNTRY

N/A

*-not mail on JPO  
- seems to only reach steel*

APPL-NO: JP01342225

APPL-DATE: December 29, 1989

INT-CL (IPC): C23C022/30, C23C022/28 , C23C022/82

US-CL-CURRENT: 427/367

ABSTRACT:

PURPOSE: To improve corrosion resistance, coating suitability, and chemical resistance by applying an acidic aqueous solution containing specific chromic acid and multifunctional polyol to the surface of a plated steel sheet and then carrying out baking.

CONSTITUTION: An acidic aqueous solution which contains 1-100g/l of chromic acid reduced so that (trivalent Cr)/(sexivalent Cr) is

0.1/0.9 to 0.7/0.3 by  
the previous addition of reducing agent to chromic acid and  
also contains  
multifunctional polyol composed of novolak-type phenolic  
resin being a skeleton  
so that the ratio of the multifunctional polyol to the  
chromic acid is (0.01-5)  
to 1 is used as a chromating solution. This solution is  
applied to the surface  
of a plated steel sheet by 5-100mg/m<sup>2</sup> expressed in  
terms of chromium  
coating weight, followed by baking. If necessary, one or  
more kinds among  
phosphoric acid, fluorine compound, metal metal compound,  
and oxide sol are  
incorporated to the above chromating solution so that the  
ratio of them to the  
chromic acid is (0.01-5) to 1. By this method, superior  
corrosion resistance  
and coating suitability can be obtained while reducing film  
thickness.

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